

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for allocating bandwidth in a network appliance where the network appliance includes a plurality of guaranteed bandwidth buckets used to evaluate when to pass traffic through the network appliance, the method comprising:

providing a shared bandwidth bucket associated with each of the plurality of the guaranteed bandwidth buckets;

allocating bandwidth to the shared bandwidth bucket based on [[the]] an underutilization of bandwidth in any one of the plurality of guaranteed bandwidth buckets;

determining whether bandwidth in one of the plurality of guaranteed bandwidth buckets is sufficient to allow traffic to pass immediately through the network appliance; [[and]]

transferring bandwidth from the shared bandwidth bucket to the one of the plurality of guaranteed bandwidth buckets when ~~it is determined that~~ the bandwidth in the one of the plurality of guaranteed bandwidth buckets is not sufficient to allow traffic to pass immediately through the network appliance;

determining whether bandwidth in another one of the plurality of guaranteed bandwidth buckets is sufficient to allow traffic to pass immediately through the network appliance; and

transferring bandwidth from the shared bandwidth bucket to the other one of the plurality of guaranteed bandwidth buckets when the bandwidth in the other one of the plurality of guaranteed bandwidth buckets is not sufficient to allow traffic to pass immediately through the

network appliance, where the one of the plurality of guaranteed bandwidth buckets is allocated a first amount of bandwidth and the other one of the plurality of guaranteed bandwidth buckets is allocated a different amount of bandwidth.

2. (Currently Amended) The method of claim 1, ~~wherein~~ where the shared bandwidth bucket is a token bucket.

3. (Currently Amended) The method of claim 1, ~~wherein~~ where the plurality of guaranteed bandwidth buckets are token buckets.

4. (Currently Amended) The method of claim 1, ~~wherein~~ where the plurality of guaranteed bandwidth buckets are credit/debit buckets.

5. (Currently Amended) The method of claim 1, ~~wherein~~ where each of the plurality of guaranteed bandwidth ~~buckets~~ buckets is associated with a traffic shaping policy.

6. (Currently Amended) The method of claim 1, ~~wherein~~ a where the plurality of guaranteed bandwidth buckets are associated with a single traffic shaping policy.

7. (Currently Amended) The method of claim 5, ~~wherein~~ where the traffic shaping policy screens based on IP address.

8. (Currently Amended) The method of claim 7, ~~wherein~~ where the traffic shaping

policy screens based on source IP address.

9. (Currently Amended) The method of claim 7, ~~wherein~~ where the traffic shaping policy screens are based on destination IP address.

10. (Currently Amended) The method of claim 7, ~~wherein~~ where the traffic shaping policy screens are based on protocol type.

11. (Currently Amended) The method of claim 7, ~~wherein~~ where the traffic shaping policy screens are based on UDP/TCP port number.

12. (Currently Amended) The method of claim 7, ~~wherein~~ where the traffic shaping policy screens are based on the type of service requested.

13. (Currently Amended) The method of claim 5, ~~wherein~~ where the traffic shaping policy screens are based on traffic content.

14. (Currently Amended) A method for allocating bandwidth in a network appliance, the method comprising:

defining a guaranteed bandwidth allocation for a first policy for passing traffic through the network appliance including using a first bucket to allocate the guaranteed bandwidth;

defining a different guaranteed bandwidth allocation for a second policy for

passing traffic through the network appliance including using a second different bucket to allocate the different guaranteed bandwidth;

sharing excess bandwidth developed from [[the]] an underutilization of the guaranteed bandwidth allocated to the first bucket and the different guaranteed bandwidth allocated to the second buckets different bucket including:

providing a shared bandwidth bucket associated with the first bucket and the different bucket and second buckets; [[and]]

borrowing bandwidth from the shared bandwidth bucket by one of the first bucket and second buckets when the respective first bucket has insufficient bandwidth to allow traffic to pass immediately through the network appliance;

borrowing bandwidth from the shared bandwidth bucket by the different bucket when the different bucket has insufficient bandwidth to allow traffic to pass immediately through the network appliance.

15. (Currently Amended) An apparatus for allocating bandwidth in a network appliance where the network appliance includes a plurality of guaranteed bandwidth buckets used to evaluate when to pass traffic through the network appliance, each of the plurality of guaranteed bandwidth buckets being allocated different amounts of bandwidth, the apparatus comprising:

a shared bandwidth bucket associated with [[a]] the plurality of [[the]] guaranteed bandwidth buckets;

means for allocating one or more components to allocate bandwidth to the shared bandwidth bucket based on [[the]] an underutilization of the different amounts of bandwidth

[[in]] allocated to the plurality of guaranteed bandwidth buckets; and

a scheduler operable to:

evaluate a packet to determine if a traffic shaping policy should be applied to a given the packet,

evaluate a guaranteed bandwidth bucket, of the plurality of guaranteed bandwidth buckets, associated with an identified traffic shaping policy,

determine when the guaranteed bandwidth bucket, of the plurality of guaranteed bandwidth buckets, associated with [[an]] the identified traffic shaping policy has insufficient capacity to support a transfer of the packet through the network, and

borrow bandwidth from the shared bandwidth bucket by ~~a respective the~~ guaranteed bandwidth bucket, of the plurality of guaranteed bandwidth buckets, to allow traffic to pass immediately through the network appliance.

16. (Currently Amended) A network device comprising:

a first bucket configured to receive tokens at a first information rate;

a second bucket configured to receive tokens at a second different information rate;

a third bucket configured to receive extra tokens from the second bucket; and

a scheduler configured to:

determine if a size of traffic received at the network device exceeds a number of tokens stored in the first bucket,

determine, when the size of the traffic does not exceed the number of tokens stored in the first bucket, if a size of the traffic exceeds a number of tokens stored in the

second bucket, and

transfer, when the size of the traffic exceeds the number of tokens stored in the second bucket, an appropriate number of tokens from the third bucket to the second bucket so that the second bucket includes a number of tokens that equals or exceeds the size of the traffic.

17. (Currently Amended) The network device of claim 16, ~~wherein where~~ the scheduler is further ~~configured~~ to:

cause the traffic to be forwarded after the transfer; and
decrement the number of tokens in the first and second buckets based on the size of the traffic.

18. (Currently Amended) The network device of claim 16, ~~wherein where~~ the scheduler is further ~~configured~~ to:

determine if the third bucket includes the appropriate number of tokens, and prohibit the traffic from being forwarded when the third bucket includes less than the appropriate number of tokens.

19. (Currently Amended) The network device of claim 16, further comprising:
one or more input ports ~~configured~~ to receive traffic from a network, each of the one or more input ports including [[the]] another first bucket, [[the]] another second bucket, [[the]] another third bucket, and [[the]] another scheduler.

20. (Currently Amended) A method comprising:
- receiving traffic;
- determining if a policy is to be applied to the traffic;
- determining, when [[a]] the policy is to be applied to the traffic, if a size of the traffic exceeds a number of tokens in a first bucket, the first bucket being associated with the policy;
- determining, when the size of the traffic does not exceed the number of tokens in the first bucket, if the size of the traffic exceeds [[the]] a number of tokens in a second bucket;
- determining, when the size of the traffic exceeds the number of tokens in the second bucket, if a third bucket includes an appropriate number of tokens that, when added to the number of tokens in the second bucket, would equal or exceed the size of the traffic;
- transferring the appropriate number of tokens from the third bucket to the second bucket when the third bucket includes the appropriate number of tokens; [[and]]
- determining if a different policy is to be applied to the traffic;
- determining, when the different policy is to be applied to the traffic, if a size of the traffic exceeds a number of tokens in another first bucket, the other first bucket being associated with the different policy;
- determining, when the size of the traffic does not exceed the number of tokens in the other first bucket, if the size of the traffic exceeds the number of tokens in another second bucket;
- determining, when the size of the traffic exceeds the number of tokens in the other second bucket, if another third bucket includes an appropriate number of tokens that, when added to the number of tokens in the other second bucket, would equal or exceed the size of the traffic;

transferring the appropriate number of tokens from the other third bucket to the other second bucket when the other third bucket includes the appropriate number of tokens; and
forwarding the traffic after the transferring of the appropriate number of tokens
from the other third bucket.

21. (Cancelled)

22. (Cancelled)